

Before the  
**FEDERAL COMMUNICATIONS COMMISSION**  
Washington, DC 20554

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Federal Communications Commission  
Office of Secretary

In the Matter of ) ET-Docket No. 93-62  
Guidelines for Evaluating the Environmental ) and FCC Report and Order FCC 96-326  
Effects of Radiofrequency Radiation )

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To: The Commission

**Comments on, some statements in support of, and some statements in  
opposition to some requests in petitions for reconsideration**

Regarding FCC Report and Order FCC 96-326

- (1) Opposition to some requests in Petitions of Reconsideration of Ameritech Mobile Communications, Inc. to preempt state regulation and tort liability for RF exposure, and**
- (2) Opposition to request of Electromagnetic Energy Association to preempt non-personal wireless services and to establish the 1992 ANSI/IEEE standard which U.S. EPA finds has 'serious flaws', and**
- (3) Support for keeping exposures as low as reasonably achievable and support for any requests to the Commission to adopt this standard**

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## SUMMARY

A citizen responding from the State of Washington recognizes states can benefit from wireless telecommunications capabilities and industry. But for this to occur exposure to potentially adverse radiofrequency emissions needs to be carefully considered and planned. To accomplish such planning states need to maintain what jurisdiction they now have regarding regulatory and tort liability authority.

In addition, federal health agencies and claimed reports, which are being verified, suggest that current Federal Communication Commission exposure standards may not necessarily protect from all mechanisms. Accordingly, the jurisdiction of states to maintain their current regulatory and tort liability authority is seen to be of significant practical importance. Also, the Commission should ask federal health agencies to review studies noted herein and determine what warnings or modified limits are indicated; this may reduce conditions leading to state regulation or tort claims.

Many petitions for reconsideration find Commission rules unclear. It is necessary to have clear rules which provide full protection to both reduce cause for state or local jurisdiction regulation as well to prevent the circumstances that lead to tort claims.

Requests by petitions for reconsideration were made to further preempt state jurisdiction by also preempting non-personal wireless communications services from state and local jurisdiction now only preempted for personal wireless services as given in Sec. 704 of the Telecommunications Act. Other preemptions requested are to preempt state or local jurisdiction regulating 'operation' of preempted facilities, and preempting state tort law. Such preemptions are not appropriate and not in the public interest.

Congress has already heard the arguments for all such preemptions, insofar as the Telecommunications Act was just enacted this year. Congress weighed the benefits of uniformity of criteria for the developing the Nation's wireless infrastructure vs. the benefits of honoring the democratic rights of states and local jurisdictions to determine what is best for their jurisdiction.

Hence, Congress explicitly indicated its intent and explicitly specified only personal wireless services were to enjoy a limited preemption, and Congress explicitly removed 'operation' from

HR 1555. Congress also explicitly granted states authority to regulate to assure public safety in Sec. 253, and tort law one form of this.

Radiofrequency regulations now under state jurisdiction provide important functions for the public interest. States and local jurisdictions can often more quickly respond than the Commission to the latest scientific results, and modify criteria accordingly. This both provides increased safety to those affected and may stimulate the Commission review its RF standard. Also, tort claims provide an important motivation for continued research and vigilance by telecommunications companies who are key providers of the studies upon which standards are based.

The request to preempt state tort liability should not be granted. While an explicit Congressional preemption does not foreclose further preemption, it implies that strong reasons are needed to show otherwise. Moreover, for all the preemptions above, the Telecommunications Act of 1996 and the courts stress dealing with each law or tort claim on a 'case by case' basis. As noted above, tort claims provide a critical stimulus to research and strive toward safety in an industry where most of the main experts and studies originate from industry.

Finally, by implementing a standard for keeping exposures as low as reasonably achievable the Commission may provide a key motivation to the telecommunications industry, which are among the key parties developing the appropriate research for standards setting, to apply their findings without the delay that often occurs due to lengthy standard setting proceedings. Indeed, the State of Washington, the National Institute of Occupational Safety and Health, the International Radiation Protection Association, and federal regulations concerning ionizing radiation include provisions to keep exposures as low as reasonably achievable. This should indicate to the Commission the wisdom of so doing, and thereby creating the motivation which may help keep exposures low, and thus avoiding the state regulations or tort claims which may otherwise occur.

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To: The Commission

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**Introduction**

1. Statements are offered by a citizen of the State of Washington in opposition to the following Petitions for Reconsideration of the Commission's Report and Order FCC 96-326 ("R&O") reported in Public Notice Report No. 2154 issued in the above docket on September 18, 1996 and published in the Federal Register on September 23, 1996. These comments and statements are being filed with the Commission in a timely manner pursuant to Commission rules for responses to petitions for reconsideration as given in CFR 47 Part 1 Sections 1.4(b)(1) and 1.429. Comments will pertain to following petitions for reconsideration of (1) Ameritech Mobile Communications, Inc. filed by J.A.Prendergast, and of the (2) Electromagnetic Energy Association filed by J.I.Stewart et al.

For convenience these petitions will be referred to by the associated number above, e.g. #1 represents Ameritech Mobile Communications, Inc.

2. The growth of telecommunications capabilities are viewed as opportunities to provide many important economic, educational, recreational, and other benefits to our State, its

businesses, institutions, and the public at large. Indeed, Washington is seeking ways it can attract telecommunications companies and the jobs and services that they provide while encouraging the deployment of advanced networks to Washington businesses and residents. Washington seeks to assure that its businesses will have the communication tools they need to thrive in national and global markets; that Washington's students have the educational resources to enable them to do well in job markets of the twenty-first century; that Washington consumers will enjoy the benefits of robust competition for telecommunications and information products and services; and that Washington residents will have universal access to first-rate medical care and government services. Washington views the firm establishment of advanced telecommunications technology products and services as providing a key role in achieving these goals, and in this regard seeks to find ways to accommodate the telecommunications industry and attract telecommunications investments to the State of Washington.

Moreover, the State of Washington recognizes that to best benefit from the many opportunities this technology offers that this technology must be developed and implemented in a thoughtful, planned way. In particular, planning should seek to assure that radio frequency or microwave emissions from wireless telecommunication facilities will be safe and not adversely affect the public health and safety, or quality of life of our personal, work, or business environments; and assure a balance between citizen concerns, and those of consumers and non-consumers of telecommunications services. Therefore, to exercise its judgment on how to best accomplish the above, it is in the best interest of the State of Washington and other states to place emphasis on maintaining its jurisdiction and authority provided in current law.

3. The following is noted concerning petitions for reconsideration in the above docket of the Federal Communications Commission ("Commission") Final Rule and Order 96-326 ("R&O"):

3.1 Further Preemption of State Authority and Jurisdiction: Petitioners #1 and #2 above seek to further preempt the jurisdiction and authority of States beyond that provided for in the Telecommunications Act of 1996 [Public Law 104-104, 110 Stat. 56 (1996)] and beyond that provided for in the Commission's R&O. The Telecommunications Act [Section 704, (a) (7) (B) (iv) and the R&O Part 1 §1.1307 (e) now provide that, *"No State or local government or*

*instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the regulations contained in this chapter concerning the environmental effects of such emissions."* However, Petitioners #1 and #2 in requesting reconsideration seek to extend preemption of State jurisdiction and authority.

3.1.1 Petitioner #2 requests preempting state authority to regulate any Commission licensees, i.e. adding to preempting services all non-personal wireless services (e.g. adding to preempted services all AM, FM radio, TV broadcast and other non-personal wireless services now subject to State jurisdiction and authority).

3.1.2 Petitioner #1 requests to also preempt state authority concerning the "operation" (e.g. radio frequency emissions) of preempted facilities, and

3.1.3 Petitioner #1 requests preempting tort liability laws of states, and it is requested the Commission should *"specify a Federal rule of liability for torts related to the environmental effects of RF emissions, so that licensees can avoid unnecessary and conflicting lawsuits..."*.

Insofar as some states are seeking considerable sums in damages from other industries historically regulated by federal agencies, it is recognized that the right to have the option to seek such redress through tort liability law may be significant, and thus is a right which states are jealous to protect and loathe to lose.

4. As noted, states are jealous to guard their jurisdiction and authority, and also seek to avoid strengthening further precedent for diminishing them, and therefore would tend to seek to prevent any diminishing of authority such as the above preemptions in 3.1.1-3.1.3.

In addition, to assess the significance and implications of the above preemptions, it is important to consider the extent to which the proposed Commission's R&O will assure the public safety - such consideration includes both (A) the certainty with which the exposure standard assures safety, and (B) how its implementation will be deployed. Accordingly, before examining the merits of the above preemption requests, a brief examination is appropriate to determine if there is cause to be concerned. In so doing comments and views will be given concerning other requests made in the above petitions for reconsideration.

#### **A. Grounds For Concern That Standards Reported Are Not Necessarily Protective of All Mechanisms**

5. In order to evaluate public safety concerns it is important to know which radio frequency (RF) exposure standard will be used. However, some petitions are challenging the Commission standard (herein called "FCC 1996"), and instead request the standard the Commission originally proposed in its April 1993 Notice of Proposed Rulemaking. FCC 1996 is based primarily on the recommendation of the U.S. Environmental Protection Agency ("EPA") to adopt the 1986 RF exposure standard of the National Council For Radiation Protection and Measurements ("NCRP 1986"); the NCRP is chartered by the U.S. Congress. The alternative standard some petitions are challenging the Commission to use is that adopted in 1991 by the Institute of the Electrical and Electronic Engineers and called IEEE C95.1-1991 ("IEEE 1991"), and which were adopted by the American National Standards Institute in 1992 ("ANSI"). Hence, to evaluate whether there are valid safety concerns it is important to evaluate what may be the substantive differences in safety if IEEE 1991 is used in lieu of FCC 1996.

6. The Commission states, *"The two sets of guidelines, however, do differ in some respects. The NCRP MPE (maximum permissible exposure) limits are generally more stringent than the ANSI/IEEE limits for magnetic field strength at frequencies below 3 MHz and for power density at frequencies above 1500 MHz."* [R&O #14]. Indeed, the exposure criteria for the general population for 'wireless cable television' (Multichannel Multipoint Distribution Service, MMDS) at around 2600 MHz the IEEE 1991 limits are 173% of the FCC 1996 limits, and for 'cellular television' (Local Multipoint Distribution Service, LMDS) IEEE 1991 limits are 1000% (10 fold) of the FCC 1996 limits. One reason the LMDS limits are so much higher for the IEEE 1991 than for FCC 1996 is that at the higher frequencies the limits are the same for both workers, who are fully aware of their exposure and in control of their exposure, and for the general population. Indeed, in its letter to the Commission the EPA made note of the above and concluded, *"Therefore, EPA recommends against adopting the 1992 ANSI/IEEE standard because it has serious flaws that call into question whether its proposed use is sufficiently protective of public*



*health and safety.*" [letter of Margo Oge, Director of EPA Office of Radiation and Indoor Air to the Commission, November 9, 1993].

7. To appreciate why EPA found these higher limits of IEEE 1991 to be a "serious flaw," a review has been made of the 120 "Final List of Papers Reviewed for C95.1-1991" ("Final List Papers") and the IEEE References used to develop IEEE 1991. Out of the thousands of papers in the scientific literature, these Final List Papers were those found "with adequate dosimetry" and were evaluated for "scientific quality and originality of the data, reliability,..." and found acceptable for standard setting. [IEEE 1991 page 27]. Of these Final List Papers and Reference papers, there appear to be five papers for which effects at the higher frequencies were studied using exposures at levels at or below the IEEE 1991 limits but above the FCC 1996 limits, and these reported effects are:

- (1) People are expected to feel 'very warm to hot' (Gandhi et al, 1986)<sup>14</sup>
- (2) People perceive on their arms warmth within 10 seconds.<sup>15</sup>
- (3) At the highest frequency that IEEE 1991 considers, 300 GHz, its limits *"may be uncomfortable to view or feel upon the skin..(and that it is best to) ..maintain exposure levels as far below the (limit values) as is practicable."*<sup>16</sup>
- (4) In mice was "induced significant leucocytosis, lymphocytosis, and neutrophilia ...Effects on erythrocytes, hemoglobin, and hematocrit differed in the three strains."<sup>18</sup>
- (5) An IEEE 1991 reference recommended for the general population using the FCC 1996 limits for the higher frequencies.<sup>19</sup>
- (6) Also, at two fold or less of the IEEE 1991 limits at the higher frequencies, it was reported there was "muscular flaccidity or collapse" of chicks, and mild hyperpyrexia below the frontal portion of a rat's skull.<sup>17</sup>

8. Thus, it appears these reports raise serious questions about the safety of IEEE 1991 and may have contributed to the EPA conclusions. Accordingly, concerning an evaluation of these studies, the Commission is urged to seek the advice of EPA and other federal health agencies as the Commission said it was its policy to do in health matters [R&O #28]. If these agencies report that study findings are not compatible with public health objectives, then it is requested the

Commission have limits no less conservative than its current limits; in this event, the Commission is also urged to not adopt IEEE 1991 as requested by Petitioner the requests of petitions #2. Indeed, to maintain its credibility with the public, it would be expected that the Commission would require substantial and convincing evidence from such federal health agencies that allowing an increase to the IEEE 1991 limits would certainly not have adverse effects.

Accordingly, since there is uncertainty about what the exposure standard will be, it becomes more important that the states maintain what jurisdiction they have so that it may as best it can seek to protect the public health; e.g. to maintain the authority discussed in 3.1.1-3.1.3 above.

9. The Commission notes in its R&O that it is adopting protection limits based on a threshold at which hazardous effects were reported to occur and then to select 1/50th of this threshold as appropriate limits for the general public. Yet, it appears that among the Final List Papers (described in Paragraph 7) that there are at least 13 papers in which adverse effects in animals are reported below this threshold level, some with adverse effects being claimed reported at exposure levels below 1% of the hazard threshold from which Commission exposure limits were derived. These effects appear to include three experiments showing cancer promotion and acceleration<sup>9</sup>, disruption of learned skills or learning of new skills<sup>1-8,10</sup>, fetal abnormalities<sup>11</sup>, and indications or suggestions of pathological brain damage<sup>12-13</sup>. Indeed, at the lowest exposure level among these final list papers it was reported, *"Thus, it was determined that long term exposure to nonionizing microwave radiation with intensity (as low as 0.1% of the FCC hazard threshold) 3 times a day 40 minutes at a time , for 2 months elicits changes in the ultrastructure of the hippocampus (of the brain) ...The demonstrated changes can most probably effect their function and constitutes one of the elements of pathogenesis of early disturbances in people exposed to this environmental factor."*<sup>13</sup>. Accordingly, the Commission is also asked to request the federal health agencies to review these 13 IEEE 1991 Final List Papers studies, and if these health agencies find that these studies do report disruption of behavior or other adverse effects below the present NCRP 1986/IEEE 1991 hazard threshold, that the Commission ask these health agencies whether more restrictive limits would be justified, and how restrictive might the exposure limits become with sufficient justification.

In addition, since these papers are considered of high quality and chosen for the purpose of standard setting by the Institute of Electrical and Electronic Engineer committee developing the IEEE C95.1-1991 standard, the findings of these papers would suggest there is uncertainty concerning the protection provided by the Commission's limits.

Moreover, there are further reasons for uncertainty of the protection provided by the Commission's R&O. Consider, that when reviewing the IEEE 1991 hazard threshold, which is the same as that selected by the Commission, the U.S. Food and Drug Administration (FDA) wrote, *"In our opinion, it is unclear what types of biological effects and exposure conditions are addressed by the standard. For example, very few research studies of long-term, low-level exposures of animals were included in the scientific rationale for the standard, despite the existence of animal studies that suggest an association between chronic low level exposures and acceleration of cancer development. Other studies have been published since finalization of the standard that strengthen this concern."*<sup>20</sup> Likewise, EPA noted to the Commission in its 1993 letter<sup>21</sup> that both IEEE 1991 limits and NCRP 1986 limits protect from thermal effects (e.g. from overheating) and that a claim that these limits *"are protective of all mechanisms of interaction is unwarranted."*<sup>21</sup> Also, the National Institutes of Occupational Safety and Health (NIOSH) has stated that the hazard threshold upon which the Commission limits are derived *"are based only on one dominant mechanism -- adverse health effects caused by body heating."*<sup>22</sup> Indeed, while in its July 25, 1996 letter the EPA informed the Commission that its R&O "addresses our concerns about adequate protection of public health," a subsequent October 1996 letter of clarification<sup>23</sup> concerning the meaning of "adequate protection" was clarified by Norbert Hankin of EPA to mean protection from "acute, thermal exposures, not non-thermal, chronic exposures" and that the nonthermal effects noted in the 1993 EPA letter (e.g. cancer, eye damage) are among those not necessarily protected by the Commission's limits (see Exhibit A). Likewise, the FDA's concern about the paucity of studies of chronic exposure to RF fields and exclusion of studies indicating cancer risks which it noted in its Nov. 10, 1993 letter to the Commission regarding IEEE 1991, also is a concern acknowledged by the NCRP standard in which it states, *"Western reports (e.g. from North America and European researchers) are largely based on acute studies*

*of laboratory animals, exposed at relatively high levels of irradiation,"* [NCRP 1986, pg. 169], and a study indicating a more than three fold increase in cancer among laboratory animals at exposure levels deemed safe for people was noted as a "future consideration" in NCRP [NCRP 1986, pg. 287-289]. Thus, insofar as the Commission's exposure limits are derived from an adverse effects threshold based upon thermal effects (R&O #3) as described by EPA<sup>21,23</sup>, and insofar as the Commission states it relies on the advice of federal health agencies it is not clear how the Commission determined and reported it believes its regulations are sufficient "to protect the public health" (R&O #168) since federal health agencies indicate such an assumption may be "unwarranted."<sup>21</sup> In addition, the above noted results of some of the IEEE Final List papers appear to provide indications that there may be adverse effects below the hazard level upon which the Commission's limits are based. Accordingly, given this uncertainty and indications of effects below the hazard threshold of the above standards, there is good cause for States to seek to retain what regulatory and tort liability jurisdiction they have, e.g. those in 3.1.1-3.1.3.

#### **B. Deployment of standard**

The extent to which States can expect proper deployment of the Commission's standards will also be a consideration of the need to maintain present State regulatory and tort liability authority. Yet, many of the petitions for reconsideration from telecommunication operators and citizen groups note the ambiguity, lack of methodology, or lack of reasonableness of the Commissions rules for evaluating exposures or for maintaining limits. These petitions ask: (1) "What is the area over which exposures are to be determined?"; (2) "Who is responsible for keeping track of the total exposures?"; (3) "If limits are exceeded at a site with many transmitters from different companies, which companies have to reduce exposure?"; (4) "If a company's transmitter only contributes less than 10% or 25% respectively, of the exposure limit, then must that company also reduce exposure if limits are exceeded?" (if there are many companies will all be able to avoid reducing exposure since none may contribute 10% or 25% of the exposure?; (5) "It appears exposures to people in buildings of the same height as nearby transmitters seem not considered in the Commission rules for evaluations- why is this?"; and

(6) "If a license for a facility has been granted when exposure limits were less restrictive, can the facility avoid having to meet the new exposure protection limits, and if so, can it also avoid them upon license renewal?"

The uncertainty evidenced by the above questions may likely not maintain the confidence of the public or states. The Commission must provide convincing and successful methods for assuring proper evaluations for transmitters distributed geographically in complex ways. However the Commission resolves these concerns, it must put the public health first so that it is abundantly clear to states and the public that in a timely manner the more protective limits will be established for all Commission licensees, that a methodology will be implemented for monitoring to assure non-compliant operations come to the Commission's attention.

Consequently, given all of the above uncertainties of both the protection of the standard and the methodology to assure it is fully and properly deployed for all licensees, it is just, fair, and proper that states maintain the right of its jurisdiction and the rights of its residents to seek redress through tort liability recourse and presently allowable State regulatory action, and, it is not in the public interest for the Commission to attempt to diminish such State authority.

#### **C. Consideration of the legal merits of arguments for further preempting regulatory and tort liability authority**

Requests to extend preemption in Part 1 Section 1.1310 (e) from 'personal wireless services' to all Commission licensees.

Petition #2 argues for preempting from state jurisdiction all Commission licensees because the Commission may preempt if state or local law "stands as an obstacle to the accomplishment and execution of the full objectives of Congress," and further that Congress' explicit preemption of 'personal wireless services' "confirms the FCC's authority to preempt all state and local regulation inconsistent with its RF energy regulations, and reflects Congress' recognition of the factual basis for concluding that such regulation will impede the implementation of important communications policy objectives."

A key question is does the above reflect actual Congressional intent or judicial precedent?

To learn the intent of Congress first consider the Act. By Congress explicitly stating that the preemption applies only to 'personal wireless services' this is strong evidence that this is what Congress intended. While it is correct that an explicit preemption by Congress does not bar an extension of the preemption, federal courts have ruled that such extending shall be considered on a 'case by case basis' and only allowed when there is clear evidence that in a given case state or local regulation stands as "*an obstacle to the full objectives of Congress.*" Louisiana Public Services Commission vs FCC 476 U.S. 365, 368-69 (1986) (citing Hines vs. Davidowitz, 312 U.S. 52 (1941)). However, the petition is requesting preemption of all state and local jurisdiction of non-personal wireless services regardless of its subject, scope or effect, and regardless of whether such regulation would stand as an obstacle to the objectives of Congress. It is interesting to note that in Louisiana vs FCC that the FCC presumed that its regulatory authority allowed it to set rules for depreciating telephone plant and equipment arguing if different states had different rules this could 'act as an obstacle'. Yet, the court ruled against the FCC, and in part ruled, "...the FCC may not take 'pre-emptive action merely because it thinks such action will best effectuate a federal policy.'" The Court then stated, "In our view, the language, structure, and legislative history of the Act best support petitioners' position...". In the case of the Telecommunications Act of 1996, there was extensive debate and discussion in Congress on which FCC licensed services would be pre-empted and how to properly balance various goals to best meet the public interests - and, no doubt, all of the arguments being made in the petitions to request further preemptions were already made to Congress and were already considered. Moreover, there is a history of not attempting to preempt globally, but only case by case based on the merits, and even in the Telecommunications Act Sec. 704, the 'case by case' language was maintained.

Petition #2 then argues, "If the Commission believes that its standards are 'based on the best scientific thought and are sufficient to protect the public health' [R&O #168], it should preclude inconsistent regulations for all parts of the spectrum, not just some." There are a number of difficulties here. First it should be considered that federal standards, and in particular Commission standards, do not change as quickly as new scientific information becomes available.

For example, the Commission adopted the ANSI 1982 standard shortly after it was issued. However, while the IEEE C95.1-1991 standard was adopted in September 1991, it was not until 18 months later, in April 1993 that it was even proposed for adoption by the Commission. Moreover, the 1986 RF standard of the National Council For Radiation Protection and Measurements included all of the protections of the ANSI 1982 RF standard plus additional protections. Thus, to bring this lengthy proceeding to issuing a final rule literally 'took an act of Congress' - three and a half years after the Commission made its original proposal, and ten years after the finally adopted standard was issued. States and local jurisdictions however are not so encumbered, and can much more quickly respond as new scientific data becomes available. Indeed, the U.S. Environmental Protection Agency wrote in its 1993 letter to the Commission that, *"While there is general, although not unanimous, agreement that the data base on low-level, long-term exposure is insufficient to provide a basis for standards development, some contemporary guidelines state explicitly that their adverse-effect level is based on an increase in body temperature (NRPB 1993)."* Subsequently, in response to a letter of inquiry, Norbert Hankin of the EPA confirmed, *"As I have previously noted, while there is sufficient information on thermal exposure/effects on which to base a standard, the data base on low-level, long-term exposure is insufficient to provide a basis for standards to protect the public against adverse human health effects that may result from long-term, non-thermal exposure."*<sup>23</sup> Accordingly, as the non-thermal, chronic exposure scientific data base grows, public health considerations based on scientific risk assessment will move some states or local jurisdictions to determine there are bona fide scientific bases for establishing standards for non-thermal effects. This will not occur overnight, but be a process. For that process to occur, it is essential that non-personal wireless services remain subject to Commission as well as to state or local jurisdiction regulation so that there can be 'visibility' on the need for the Commission to reconsider its standards. Indeed, Congress may have intentionally allowed this 'tension' in order that the just mentioned process of the unfolding of new standards be allowed to occur, and provide means by which the Commission may be made aware of the need to re-examine its standards. Consequently, maintaining current

state and local jurisdictions serves a critical public need and maintaining such jurisdiction is in the public interest.

Furthermore, the Petitioners #1 and #2 may have misunderstood the statements of the Commission concerning the above quote. The Commission's stating "sufficient to protect the public health" may have been stated assuming the reader was familiar with the comments made by the federal health agencies in their letters to the Commission in 1993 or 1994 and when reviewing a final draft in July 1996. For example, in its Nov. 9, 1993 letter EPA identified the adverse effects threshold in both the NCRP 1986 and IEEE 1991 standard as "the threshold for a specific biological effect, i.e., behavioral disruption (work stoppage) in nonhuman primates that is associated with an increase in body temperature," [page 2 of comments of letter] and then describes experiments indicating nonthermal effects such as "eye damage" and "cancer". Indeed, as already noted, Norbert Hankin of EPA answered in the affirmative in response to a letter of inquiry about the 1993 EPA letter to the FCC, *"Is it correct that 'adequate protection' of public health pertains to thermally related health effects, and not necessarily to the nonthermal effects noted in the 1993 EPA letter?"* Indeed, the NCRP 1986 standard itself from which the Commission draws its limits, concluded with a section on future considerations and noting that a statistically significant more than three fold increase in primary malignant tumors occurred at exposures considered 'safe' by IEEE C95.1-1991 and NCRP 1986 standards. Hence, given all of the above, the Commission could not have meant sufficient to protect against all mechanisms, since as it has noted the 4 W/kg upon which its standard is based is the same as for IEEE C95.1-1991 about which EPA wrote the Commission that the thesis that limits based upon such a 4 W/kg hazard threshold "are protective of all mechanisms of interaction is unwarranted because the adverse effects level in the 1992 ANSI/IEEE standard is based on a thermal effect" (as is also 1996 NCRP).

The #10 Petitioners also note that even if Congress did not intend to preempt further, a court may still find implied preemption of a broader area based upon analysis of potential conflicts between state and federal law. Freightliner Corp. v. Myrick, 115 S.Ct. 1483, 1488 (1995). However, what are the broader conflicts in the present matter, given that all of these arguments of the Petitioner



were considered in the broadly written Telecommunications Act of 1996?. In *Freightliner v Myrick* the Court noted that no such conflict exists if a party can fulfill both state and federal requirements, as would clearly be the case here, unless requirements were so restrictive as to have the effect of putting an obstacle before the full purposes of Congress. But in Sec. 704 of the Telecommunications Act it is seen Congress intends such questions to be decided on a case by case basis as did the Courts, for as the Joint Explanatory Statement of the Committee of Conference states, *"It is the intent of this section that bans or policies that have the effect of banning personal wireless services or facilities not be allowed and that decisions be made on a case by case basis."* [re Sec. 704].

Furthermore, the Commission has adopted the correct policy when it stated it *"has hesitated to intrude on the ability of states and localities to make regulations affecting health and safety."* [R&O #166]. If intrusion is undesirable, and only carried out in specific circumstances, by what reasoning is preemption of all RF licensed services, which Congress did not intend to preempt, preferred? It is true that Digital Television and Digital Audio Broadcasting may have to meet local or state requirements that personal wireless services need not meet. However, if as noted above, states and local jurisdictions may more quickly respond to the latest scientific findings, then to that extent the "placement, construction, and modification" of personal wireless services facilities under state or local jurisdiction will better meet the public interests of those living near such facilities, and will, as noted, demonstrate and make visible the need for the Commission to review its standards. Thus, Congress decided that uniformity of regulations has a lesser priority in order that the advantages noted above best serve the public interests.

Petitioner #7 notes that the Telecommunications Act of 1996 preempts state and local jurisdiction "placement, construction, and modification" of personal wireless services facilities on the basis of environmental effects of radio frequency emissions. The Petitioner then submits the Commission should also preempt the 'operation' of such facilities, and cites that *"Congress [has] decided that once the federal government has promulgated a standard, the states usual role in setting safety standards [is] subordinated in the interests of national uniformity.... [and] the states are prohibited from establishing a non-identical standard."* Wood v General Motors

Corporation, 865 F.2d 395, 412 (1st Cir. 1988). It is interesting that the Petitioner cites Wood v. General Motors because in this case, about which is discussed preemption matters in the National Traffic and Motor Vehicle Safety Act of 1966, this Act "explicitly preempts any state safety standard - even state standards which are more stringent than the federal standards - which covers the same aspect of performance as a federal standard but which is 'not identical' to the federal standard." *Id.* at 398. Consider that *"Congress, in enacting the Safety Act, set up a clear division of authority between the states and the federal government (because the Act itself explicitly preempts as just described). If the federal government has not issued a safety standard on a certain aspect of performance, the states are allowed to set their own standards in these areas. However, Congress decided that once the federal government had promulgated a standard, that the states' role in setting safety standards was subordinated in the interests of national uniformity."* Hence, it is seen the quote given by the petitioner is not a general finding of the Court, but rather the Court is simply restating the intent specified in the language of the Safety Act and is describing only for this Act what Congress decided. It is especially surprising that the Petitioner should chose this case, since in the Telecommunications Act there was no similar explicit language in this act. Moreover, the preemption in this case pertains to a specific aspect of performance, and the Court has explicitly ruled that for aspects of performance not specified, states may set their own standard, thereby allowing non-uniform standards to occur; indeed, in the Telecommunications Act of 1996 the Joint Explanatory Statement indicates that each local jurisdiction may set its own reasonable zoning standards. In contrast to Wood v. General Motors where a specific aspect of performance is being preempted, and because such preemption is explicitly stated in the Act, the Petitioner seeks to preempt any state regulation of 'operation' whether or not it may related to a specific aspect of operation which the Commission has put forth. Furthermore, while H.R.1555 brought to the Conference Committee did say, *"The policy prescribed pursuant to this paragraph shall provide that no State or local government or any instrumentality thereof may regulate the placement, construction, modification, or operation of such facilities on the basis of the environmental effects of radio frequency emissions, to the extent that such facilities comply with the Commission's regulations concerning such emissions."*

[H.R. 1555 Sec. 108 (a)(7)(D)]. Yet, the final Conference Report has eliminated reference to "operation" and states, *"No State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless services facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the Commission's regulations concerning such emissions."* [Conference Report Sec. 704 (a)(7)(B)(iv)]. Thus, in contrast to Wood v. General Motors in which for the legislation in question Congress explicitly stated there was to be a federal preemption for an identical kind of performance standard, in our case the term "operation" was explicitly removed by the Conference committee. Thus Petitioner's quotation is without substance since it was (i) only a rephrasing of Congress's explicit language by the Court, (ii) Petitioner seeks preemption of all types of operations, whether they may be identical in kind or not to Commission regulations, and (iii) in the Petitioner's quote Congress explicitly preempted, while in our case Congress explicitly withdrew its preemption of 'operation'.

Petitioner then suggests that, *"Preemption is appropriate 'where the state law stands as an obstacle to the accomplishment of the full objectives of Congress.' "*Louisiana Public Service Commission v. FCC, 476 U.S. 355, 368-369 (1986). However, implementation of such a view must necessarily have a specific state law in order to judge whether it is an obstacle or not. Hence, the Petitioner is arguing our case, namely based on this ruling, the proper course to support the public interest is to make judgments on a 'case by case' basis, as indeed is stated in the Joint Explanatory Statement in this section 8 and noted above, and definitely not to preempt an entire field - especially one, 'operation', which Congress has explicitly withdrawn from the language of law after hearing arguments similar to that now brought to the Commission.

Indeed, it is questionable that the Petitioners cite this case since it states, *"The critical question in any pre-emption analysis is always whether Congress intended that federal regulation supersede state law,"* *Id.* at 369, and as noted, Congress' withdrawing language with reference to 'operation' is clear evidence it explicitly did not intend preemption.

Furthermore, had many years passed since the passage of the Telecommunications Act of 1996, then the Petitioner #1 might argue how circumstances have changed in a way Congress did

not consider. But both for the urging by Petitioners to preempt non-personal wireless services as well as to preempt 'operations', the Petitioners had the opportunity to speak to Congress and show them their evidence for preempting non-personal wireless services, 'operation,' and also preempting state tort liability law. Petitioners are bringing no new evidence that significant changes have occurred since that time. Congress appears to have understood that much of the difficulty lay in bans or what had the effect of bans and provided a solution in the Telecommunications Act prohibiting such zoning practices. Hence, the recent passage of the Telecommunications Act, results in petitioners coming to the Commission to receive more from it, than what Congress has considered best for the public interest, and denied petitioners' requests for further preemptions after considering the goals of furthering telecommunications vs the goals of maintaining the democratic objectives provided by allowing state authority and jurisdiction - a compromise was made on what is best in the public interest. There is essentially no new argument presented now to the Commission that was not already presented and considered by Congress. The Commission should not undo what Congress has just enacted.

Moreover, in Sec. 253 ("Removal of Barriers to Entry") of the Act, Congress provides concerning State Regulatory Authority, that *"Nothing in this section shall affect the ability of a State to impose, on a competitively neutral basis and consistent with section 254 (Universal Service) requirements necessary to preserve and advance universal service, protect the public safety and welfare, ensure the continued quality of telecommunications services, and safeguard the rights of consumers."* Hence, since wireless telecommunications is a new technology, making and expanding its entry in communities across the country, Congress is here explicitly delegating power to States to impose requirements necessary to *"protect the public safety and welfare"* for the facilities described in Sec. 704 of this Act. Thus, Congress is explicitly stating that it is not intending to 'occupy the field' and entirely regulate public safety concerning telecommunications, but rather is delegating authority to States, except, of course if the Act elsewhere explicitly preempts state and local Authority as it does in Sec. 704 (a)(7)(B)(iv) concerning the *'placement, construction and modification'* of personal wireless services facilities. Moreover, even for these functions, state and local jurisdiction authority is acknowledged except for the specific case when

such regulation is based on the "environmental effects of radio frequency emissions."

Consequently, it is clear that Congress intends to share authority with states and local jurisdictions, since Congress explicitly removed 'operation' from HR 1555 and explicitly granted States authority to regulate for public safety concerning telecommunications. Also, Congress was aware that many states and local jurisdictions had at the time of the Act and prior to it set established radio frequency exposure limits which affected the operations of telecommunications facilities, and yet, after considering the concerns and efforts of parties to the proceeding, Congress chose to exclude 'operation' from the preempted list of functions, leaving matters in this area as they were.

#### **D. Preemption of State Tort Liability authority**

Petitioner #1 requests, *"Further, the Commission should specify a Federal rule of liability for torts related to the environmental effects of radiofrequency emissions, so that licensees can avoid unnecessary and conflicting lawsuits by ensuring that they comply with the Commission's guidelines, as they are amended from time to time. As the record in this proceeding has shown, there can be differences of opinion within the scientific community as to what constitutes a harmful environmental effect, and at what level, distance, etc. radiofrequency radiation causes such effects. Therefore providers of telecommunications services face the danger of liability based on a study which is not consistent with the standards adopted by the Commission. In order for the wireless industry to move ahead with capital-intensive advanced telecommunications services, in a highly competitive environment, it is vital that the industry have a single standard to follow, and that it can steer clear of liability by following this standard."* [page 10,11 of Petition #1]

Petitioner #1 then cites court cases to support Petitioner's claim that the conditions exist whereby the Commission has the authority to so preempt state tort liability authority. There are many difficulties with the argument of the Petitioner. First, perhaps due to oversight, Petitioner #7 has misquoted, and attributed a statement to a finding of District of Columbia Circuit Court South Carolina Public Service Authority v FERC, 850 F2d 788 (D.C. Cir. 1988) where in fact the court was only re-stating the position of the Respondent in the Case before it. Specifically,

Petitioner #1 stated, *"the court stated that an administrative agency may have the 'power to specify a rule of liability governing its licensees if it were essential to achieving the goals of the Act.' "* *Id.* at 793. (here the Act is the Federal Power Act of 1982, supplemented in 1986). The full quote is, *"Improbable and intrusive though it is, we might be willing to believe that Congress's silence permits the Commission [Federal Energy Regulatory Commission or "FERC"] the power it asserts here, i.e. the power to specify a federal rule of liability governing its licensees, if it were essential to achieving the goals of the Act."* *Id.* at 793. Thus, the court does not conclude it would reach such a decision as Petitioner #1 attributes to the court. Rather, the court states it is *"improbable"* it would so conclude. Indeed, in its conclusion the court stated, *"In sum, the clear import of the statute is at one with its legislative history: while the Commission may require its licensees to abide by rules and regulations promoting safety, the liability of those licensees for damages caused by their projects is a matter left by Congress to state law."* *Id.* at 795. Similarly, in the summary of its opinion the court stated, *"We agree with the State that the licensing authority granted to the Commission under the Act does not include the power to displace existing state tort law with its own rules of liability for damages caused by licensees."* *Id.* at 789. Moreover, *"As the Supreme Court has noted, the legislative history of this Act 'discloses both a vigorous determination of Congress to make progress with the development of the long idle water resources of the Nation and a determination to avoid unconstitutional invasion of the jurisdiction of the States.' "* *Id.* at 793.

In this regard, the above Federal Power Act is similar to the Telecommunications Act of 1996. For also in this latter Act are indications of a strong desire to develop telecommunications while also respecting the jurisdiction of states. Thus, as noted above, in Sec. 253, states are empowered to impose requirements necessary to *"protect the public safety,"* and clearly state tort liability law is one important element of providing for such protection, as Petitioner #1 argues that, *"The obligation to pay compensation can be, indeed, is designed to be, a potent method of governing conduct and controlling policy."* *San Diego Bldg. Trades Council v. Garmon*, 359, U.S. 236,247 (1959) [page 11 of Petition #1]. In addition, in this San Diego case the court found that Congress had decided that federal authority would completely 'occupy the field' and stated,

*"But the unifying consideration of our decisions has been regard to the fact that Congress has entrusted administration of the labor policy for the Nation to a centralized administrative agency, armed with its own procedures, and equipped with its specialized knowledge and cumulative experience."* *Id.* at 242. However, Congress did not so chose in the Telecommunications Act of 1996 to have the Federal Communications Commission totally 'occupy the field.' But, as already noted, the Act authorized states to impose requirements to protect the public safety, and only preempted regulation of "placement, construction, and modification" of personal wireless service facilities, and only when such local regulation is on the basis of the environmental effects of radio frequency. Thus, in all other matters, Congress has provided that the Federal Communications Commission share authority with the states and local jurisdictions - and one aspect of this sharing is the allowing of the exercise of state tort liability law.

In addition, *"for [a] state law to be preempted by federal law, harm of [the] state law on [the] federal scheme should be actual, not potential."* *Palmer v Liggett Group, Inc.* 825 F.2d 620, 621. Yet, Petitioner #1 has only raised vague, potential, and unlikely scenarios that the option of being open to such liability would *"force licensees to abandon plans to locate equipment in certain areas for fear of expensive litigation."* Many states have such liability laws now - where is the evidence that this is leading to abandonment of development plans? No evidence has been given, rather, expansion and development is seen across the country.

Moreover, *"In determining whether state law suit is preempted by federal law, instead of attempting to fit federal law into some precast mold of 'impossibility' or 'frustration,' courts look to effect suit will have on federal scheme set up by Congress; if state law disturbs too much the congressional declared scheme, whether denominated by 'occupying the field' or 'actually conflicting with federal law,' it will be displaced through force of preemption."* *Id.* at 621. Since an integral part of the federal scheme in the Telecommunications Act of 1996 is that states should have broad powers to impose requirements necessary "to protect public safety" (Sec. 253 of Telecommunications Act) and other broad powers given in Sec. 704, then allowing state tort liability in principle is consistent with the federal scheme and should not be preempted.

Furthermore, the picture Petition #1 paints is not realistic concerning the nature of likely liability suits. Petition #1 notes there are differences of opinion concerning "levels, distances, etc." pertaining to the factors that may cause a harmful effect. Were liability suits to occur, they may well avoid focusing on whether a particular aspect of a regulation were appropriate or not, for consider that NCRP 1986 notes there are additional factors besides level of exposure and include, *"modulation and carrier-frequency-specific biological responses."* [NCRP 1986, page 277], and that sometimes effects occur in a *"power density window"* where at lower exposure levels there is an effect but not at higher exposures [NCRP 1986 page 151]; rather, litigants may look at the harm caused without struggling to identify any particular aspect or characteristic which caused the harm, thereby not having a regulatory effect. For example, in awarding a damage claim to a woman injured by radiation at a nuclear fuel processing plant Silkwood v. Kerr-McGee, 464 U.S. at 256, a court noted, *"the theory of liability did not focus on any specific portion of the nuclear facility's design nor on any particular procedure of the defendant. Accordingly, the suit had little potential for establishing a state safety standard; the opinion never discussing a single federal safety standard that was potentially threatened by a judicially created state standard."* [review comments from Wood v General Motors Corp., 865 F.2d 395, 413].

Furthermore, one must look at the possible nature of a tort liability suit - personal harm or property loss due to radiation from telecommunications facilities. In this regard, the court stated in Silkwood that, *"We do not suggest that there could never be an instance in which the federal law would preempt the recovery of damages based on state law. But insofar as damages for radiation injuries are concerned, pre-emption should not be judged on the basis that the Federal Government has so completely occupied the field of safety that state remedies are foreclosed but on whether there is an irreconcilable conflict between the federal and state standards or whether the imposition of a state standard in a damages action would frustrate the objectives of the federal law. We perceive no such conflict or frustration in the circumstances of this case."* Silkwood Id. at 256. It is noteworthy that the court was unanimous in its agreement in awarding compensatory damages. It is also noteworthy that the court recognized that the Nuclear



Regulatory Commission which regulated the above facility was designated by federal law as the sole regulatory authority - and yet even in this case the Court was unanimous that compensatory damages be granted. Thus, it should be all the more true with the potential possibility of liability damages due to radiation or any other factor associated with telecommunications facilities, as in this case States have been delegated as sharing authority with the Federal Communications Commission concerning "placement, construction, and modification" (being limited only under certain conditions), and also delegated to share with the federal authority "to protect public safety" in Sec. 253 as shown above.

Finally, consider that, *"in ascertaining the scope of congressional legislation a due regard for a proper adjustment of the local and national interests in our federal scheme must always be in the background."* [*South Carolina* Id. at 792]. Likewise, *"[t]he common law is not sterile or rigid and serves the best interests of society by adopting standards of conduct and responsibility that fairly meet the emerging and developing needs of our time. The common law standard of a duty to use reasonable care in light of all the circumstances can at least serve the needs of our society until the legislature imposes higher standards."* *Smith vs. Ariens*, 375 Mass. at 624-25, 377 N.E.2d at 957 (citing *Larsen v. General Motors Corp.*, 391 F.2d. at 506) and reviewed in *Wood v. General Motors Corp.*, 865 F.2d 395, 410. In this regard, consider the actual matter at hand. As noted above, (i) federal health agencies note the Commission's limits are not necessarily protective of all mechanisms of interaction, (ii) IEEE 1991 and NCRP 1986 standards note there are few studies of chronic exposure to low levels of radio frequency irradiation, (iii) and there are indications that some studies, including those on the 1991 Final List Papers, which suggest adverse effects below the hazard threshold upon which the Commission limits are based. Thus, it is not surprising that the telecommunications industry is investing in research to better understand the relevant phenomena. Indeed, Wireless Technology Research, L.L.C. has been established and funded by this industry *"to include the evaluation of all wireless communication technology."* Thus, there is good reason to find that it is within the telecommunications industry and their research efforts, that much scientific research is occurring. Indications of a strong 'industry-driven' research effort is also noted, accompanying the R&O, in a